

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn) A fuel cell separator sandwiching from both sides via diffusion layers an anode and a cathode set against an electrolyte film, the separator being made of a mixture of a thermoplastic resin selected from among ethylene / vinyl acetate copolymers and ethylene / ethyl acrylate copolymers and at least one type of carbon particles selected from among Ketjen black, graphite and acetylene black, wherein a proportion of the thermoplastic resin in the mixture is between about 14 to 20wt%, a proportion of the carbon particles is between about 80 to 86wt%, and 3 to 20wt% of the carbon particles is Ketjen black.

2. (Canceled)

3. (Canceled)

4. (Previously Presented) A fuel cell separator sandwiching from both sides via diffusion layers an anode and a cathode set against an electrolyte film, the separator being made of a mixture of a thermoplastic resin selected from among ethylene / vinyl acetate copolymers and ethylene / ethyl acrylate copolymers, at least

one type of carbon particles selected from among Ketjen black, graphite and acetylene black, and glass fiber or carbon fiber, wherein a proportion of the thermoplastic resin in the mixture is between about 14 to 20wt%, a proportion of the carbon particles is between 70 to 83.5wt%, and a proportion of the glass or carbon fiber is between about 2.5 to 10 wt%.

5. (Withdrawn) A method for manufacturing a fuel cell separator, comprising the steps of:

obtaining a mixture by mixing a thermoplastic resin selected from among ethylene / vinyl acetate copolymers and ethylene / ethyl acrylate copolymers and at least one type of carbon particles selected from Ketjen black, graphite and acetylene black, or by mixing the thermoplastic resin, the carbon particles and glass fiber or carbon fiber;

obtaining a sheet material by extrusion-molding the mixture with an extruder;
forming gas flow passage grooves in a surface of the sheet material by moving press dies at the extrusion speed of the sheet material; and

obtaining the fuel cell separator by cutting the sheet material with the gas flow passages formed therein into a predetermined shape.

6. (Withdrawn) A method for manufacturing a fuel cell separator sandwiching from both sides via diffusion layers an anode and a cathode set against an electrolyte film, the method comprising the steps of:

providing polyphenylene sulfide having a viscosity of 20 to 80 psi, graphite and Ketjen black;

obtaining a mixture by mixing 10 to 34 wt % polyphenylene sulfide, 65 to 80 wt% graphite and 1 to 10 wt% Ketjen black; and,
molding the mixture to provide the fuel cell separator.

7. (Withdrawn) The method for manufacturing a fuel cell separator according to claim 6, wherein the mixture further includes between about 5 to 15 wt% chopped carbon fiber and the graphite included in the mixture is between about 60 to 80 wt%.

8. (Canceled)

9. (Withdrawn) The method for manufacturing a fuel cell separator according to claim 5, wherein the mixture includes between about 14 to 20 wt% of the thermoplastic resin and between about 80 to 86 wt% of the carbon particles and between about 3 to 20wt% of the carbon particles is Ketjen black.

10. (Withdrawn) The method for manufacturing a fuel cell separator according to claim 5, wherein the mixture includes between about 14 to 20 wt% of the thermoplastic resin, between about 70 to 83.5 wt% of the carbon particles, and between about 2.5 to 10 wt% of the glass or carbon fiber.